

State of California
CIWMB 225 (Rev. 7/12/07)

California Integrated Waste
Management Board

CONTRACT ALLOCATION PROPOSAL

Project Title: Infrastructure Baseline Inventory and Information Management Framework	
Program/Office: SUS-STAR/LAMD	Concept No.: 2007-D-1
Requestor/Primary Contact: John Smith John Sitts	Fund (IWMA, Oil, RMDZ, etc.): IWMA
Estimated Contract Amount: \$ 800,000	

I. PROPOSAL OVERVIEW

In order to move the State beyond 50% diversion of waste from landfills and especially to achieve more ambitious goals like those currently being proposed in the Legislature (e.g. 75% by 2020 in current version of SB 1020), the Board needs basic information on the solid waste disposal, diversion, and markets infrastructure in a usable format so internal and external decision-makers can access and use the data. This contract directly implements Strategic Directive (SD) 6.5 on Market Infrastructure & partially implements both SD 8.4 on regulatory review and SD 8.5 on local planning & waste management infrastructure. In light of the Board's new structure, this contract will speed development of the Local Assistance and Market Development Division's focus on regional assessments and targeting, including the Market Assessment Action Project. Since the Board's purpose and vision hinges on highest and best use of resources and diversion of waste from landfills which are driven by infrastructure, a strong argument could be made that this contract supports all Strategic Directives.

This contract allocation would result in a comprehensive inventory of California's solid waste handling, diversion, and market infrastructure, including primary processors (transfer stations, material recovery facilities, compost facilities, etc.), secondary processors, end users (recycling manufacturers), emerging technology facilities, and disposal facilities. [Note: Executive Staff will be seeking additional funding from the CIWMB's other funds, such as the Tire Recycling Management Fund, Used Oil Recycling Fund, and/or the Electronic Waste Recovery and Recycling Account in order to broaden the scope of this effort to include E-waste, Tire and Oil infrastructure.] The contract proposal also includes the development of a data management framework to automate updates and reports and integrate this new information with the Board's existing data management systems. The contract would be completed with two components for the selected team: \$500,000 for a Facilities Program Contractor to be selected through a competitive bidding process and \$300,000 for an Information Technological Contractor to be selected through IMB's normal IT services procurement processes for a contract allocation of \$800,000 from IWMA. These costs are based on the costs of conducting prior surveys, such as the compost and mulch infrastructure in California, and extrapolating to the larger number of facilities in this effort. Also, the IT services would provide 1 PY for approximately 1.3 years based on current IMB contracting costs. Without this, IMB will not be able to provide the programming to support the development of the necessary data management framework.

The expected outcomes for this contract would be to establish: 1) an infrastructure baseline, including current throughput & existing additional capacity for individual facilities and on a regional basis; 2) model components (and relationships) that will allow for an evaluation of facilities needed to meet future local and regional watershed diversion needs under different scenarios of population and economic growth; and 3) a framework of databases, websites and tools designed for easier,

automated updates that will be integrated with the Board's existing information network and provide a geographic information systems (GIS) component for analysis. For example, a high growth county with diminishing landfill capacity will be able to use these tools to easily determine other destination facility options (such as composting or emerging technology facilities) rather than resorting to rail-haul to another state for disposal as the default option for dealing with its growing waste stream.

Almost every Board contract relates to information on California's infrastructure. The lack of reliable and comprehensive infrastructure information has made the results of other contracts and efforts less useful, less reliable, and less integrated in terms of optimizing waste management decisions. This contract will establish a foundation and baseline, and tools to make informed waste management decisions. The success of this project will be measured by the participation of facilities in the infrastructure surveys and the usefulness of the tools. If the majority of facilities provide information which is then fashioned into a useful tool, then the project will be a success. If funding for this project is not approved, then the Board and our stakeholders will continue to have incomplete information on which to base decisions regarding how to target resources, allocate funds, and site facilities. Local governments and other stakeholders will not be able to access and use information to plan for infrastructure growth and facility needs, evaluate diversion options, and make decisions needed to achieve future goals.

II. PRIMARY TASKS, DELIVERABLES AND MILESTONES

The funds will be encumbered by the end of FY 2007/08.

Phase I - Preparation: Develop infrastructure definitions, data standards & data gathering strategies.

Phase II – Data Collection: Gather information from existing data sources on permitted facilities and field surveys of both permitted and non-permitted infrastructure facilities. Conduct a comprehensive inventory of facilities in the solid waste handling, diversion, and markets infrastructure. This would include information on existing facilities showing current baseline activities and throughputs (perhaps regional aggregations if proprietary concerns are too great), as well as capacities for the materials they handle.

Phase III – Tool Development: Develop programming algorithms to best accommodate infrastructure information into the Board's data/web structure, and build tools to integrate infrastructure data. Automate current & future processes to accommodate the large increase in data handling caused by this effort so that infrastructure data can be maintained & updated. Create databases, web & GIS tools for use by decision-makers & stakeholders.

- A single, integrated web tool for use by internal and external customers that allows the user to locate infrastructure facilities and access a database on the baseline information for reference and planning purposes, and which can be used as the basis for model calculations of future needs.
- Development of the programming requirements that quantify the relationship between the potential for additional diversion and the need for additional facilities, and development of the model components needed to construct models, tools and estimators.
- Infrastructure databases, web tools and GIS tools for use by Board decision-makers and Board stakeholders such as local jurisdictions.

All phases will be finished and all deliverables will be complete by the end of FY 2009/10.

CONTRACT ALLOCATION PROPOSAL

Project Title: Research and Demonstration Projects on Landfill Alternatives for Bioenergy and Biofuels Production	
Program/Office: SUS/STAR	Concept No.: 2007-D-2
Requestor/Primary Contact: Fernando Berton	Fund (IWMA, Oil, RMDZ, etc.): IWMA
Estimated Contract Amount: \$ 500,000	

I. PROPOSAL OVERVIEW

About 27 million tons of biomass, or 57 percent of the total solid waste stream, were landfilled in 2005. The energy equivalent of this landfilled material is approximately 1750 MWe (Megawatt of electricity). The potential to produce ethanol and other liquid hydrocarbons from this same landfilled material is estimated to be equivalent to about 300 million gallons of gasoline.

Issued in April 2006, Executive Order (EO) S-06-06 called for California to increase its share of biofuel production and electricity from biomass. The order stemmed from, among other things, increased public concern over escalating fuel costs and reliance on petroleum, the desire for strong state advocacy on these issues, and commitments for improving resource management and mitigating climate change. Materials in the waste stream can be used as resources to produce alternative renewable energy and bio-fuels, thereby increasing diversion, developing new markets, and helping to mitigate climate change. This is reflected in the Board's Strategic Directive 9.2, which encourages the development of alternative energy and biofuels, and Strategic Directive 9.3, under which the Board plays an active role in the Bio-Energy Inter-Agency Working Group. As part of this, the Board sponsored the March 2007 Biofuels Forum to assess the technical and economic feasibility of producing biofuels from solid waste, with an emphasis on identifying key research, testing, and pilot project opportunities. One of the key recommendations from stakeholders was the need for additional research and demonstration projects related to biofuels and bioenergy production.

Consistent with EO S-06-06 and the Board's Strategic Directive and ongoing work on biofuels and bioenergy, this contract allocation proposal requests \$500,000 for additional research and demonstration projects with technologies that can use solid waste feedstock to produce renewable biofuels and bioenergy. Such projects could include but are not limited to anaerobic digestion of solid waste, ethanol production from solid waste, upgrading anaerobic digester gas to natural gas quality, etc. The expected outcomes for this contract allocation proposal are to achieve increased production of energy or fuel production from the selected projects.

II. PRIMARY TASKS, DELIVERABLES AND MILESTONES

To date, research activities in this subject area have been sporadic and opportunistic. A more systematic approach to research and technology demonstration projects will allow the Board to solicit competitive proposals that address multiple policy issues dealing with increased landfill diversion, production of renewable bioenergy and biofuels, and mitigating greenhouse gas emissions in support of the California Global Warming Solutions Act. Funding priorities would be directed at biological and/or biochemical technologies or processes that will help in achieving a 5 percent increase of energy or fuel production from solid waste.

As envisioned, a competitive process for a systematic review and award of two to three projects would be undertaken. A competitive process will allow Board staff to review the merits of research proposals against an established set of priorities and criteria that would be approved by the Board as part of the scope of work development process. Primary tasks to implement this concept initially include developing scoring and selection criteria and a scope of work for issuance of a Request for Proposals. Upon receipt of proposals, a review panel consisting of Board staff will score the proposals based on the criteria. Upon completion of the proposal review and scoring, Board staff will prepare an agenda item with recommended contract recipients for consideration by the Board.

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CONTRACT ALLOCATION PROPOSAL

Project Title: Plastic Grocery Bag Co-Mingled Recycling Rate for Compliance with AB 2449	
Program/Office: WCMP/CEE	Concept No.: 2007-D-3
Requestor/Primary Contact: Mike Leason	Fund (IWMA, Oil, RMDZ, etc.): IWMA
Estimated Contract Amount: \$ \$400,000 <u>75,000</u>	

I. PROPOSAL OVERVIEW

The proposed emergency regulations for the plastic carryout bag recycling program (AB 2449) require the Board to annually calculate and publish a co-mingled recycling rate factor. This factor would be used by grocery store operators to estimate the amount of plastic bags recycled and report this information to the Board. This contract proposal supports Strategic Directive 8 – Enforcement/Permitting and Strategic Directive 9- Research and Technology Development.

There are two approaches for calculating the co-mingled recycling rate. The first is for the Board, through its periodic waste characterization analysis, to determine the amount of plastic carryout bags in the waste stream and determine the co-mingled recycling rate factor. A second would be to use Department of Conservation's Division of Recycling (DOR) crews that currently perform field sampling at ~~stores and~~ recycling centers on an on-going basis to determine the amount of plastic carryout bags and determine the co-mingled recycling rate factor.

The first approach is for the Board to determine the factor through its contract for periodic waste characterization analysis. One drawback to this approach is that the Characterization contracts are scheduled for 2 out of 3 years, so funding would not be available each year to determine the plastic carryout bag recycling rate factor. Additionally, the current contract for the 2008 Characterization Study, if it could be amended to allow for this project, would not produce data for a co-mingled recycling rate factor until late February 2008.

A second approach would be for the Board to enter into an Interagency Agreement with the Department of Conservation's Division of Recycling (DOR). The DOR has crews that perform field sampling at ~~stores and~~ recycling centers on a regular, on-going basis. The DOR would need to take additional samples at stores, where they currently do not sample. The advantage of this approach is that we could potentially have a value for the co-mingled rate sometime in late 2007. Further, this may provide better information on bags and other film plastic at independent and/or small chain stores.

Either of the approaches discussed in the above paragraphs would result in a recycling rate factor that grocers can use in their annual reports to the Board on the amount of plastic carryout bags recycled. This would help grocers avoid penalties of \$500 for the first violation, \$1,000 for the second violation, \$2,000 for each subsequent violation.

Although the Board previously established a rigid plastic packaging container recycling rate factor, the plastic carryout bag recycling rate factor is yet to be determined. Regulations require the Board to develop this annual plastic carryout bag recycling rate factor, which can be used by grocers to report recycling rates to the Board as required by law, and avoid penalties. Development of a statewide, statistically valid, plastic carryout bag recycling rate factor that is as accurate as possible, will be the measure of success.

If this work is not funded this fiscal year, the Board will not meet the legal requirement to provide the recycling rate factor data.

II. PRIMARY TASKS, DELIVERABLES AND MILESTONES

Primary tasks include: 1) develop a sampling plan and procedures for the collection of representative, statewide data on plastic carryout bags; 2) identify, recruit and schedule sampling sites; 3) train sampling crews in sampling procedures; 4) gather data; 5) enter data into the database; 6) calculate a plastic carryout bag recycling rate factor; and 7) provide a final report with all calculations and documentation.

The table below shows the estimated milestones for this project.

Develop a sampling plan and procedures to collect representative, statewide, statistically valid data on plastic carryout bags	At least 3 months prior to sampling
Identify, recruit and schedule sampling sites	At least 2 months prior to sampling
Train sampling crews in sampling procedures	Just prior to sampling
Gather data	Sampling
Enter data into the database	Within 2 weeks after sampling
Calculate a plastic carryout bag recycling rate factor	Within 1 month after sampling
Provide a final report with all calculations and documentation. Provide raw sample data.	Within 6 weeks after sampling

Deliverables include: the sampling plan, raw sample data, and a final report with all calculations and documentation.

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CONTRACT ALLOCATION PROPOSAL

Project Title: Compost Safety Research	
Program/Office: WCMP	Concept No.: 2007-D-4
Requestor/Primary Contact: Robert Holmes	Fund (IWMA, Oil, RMDZ, etc.): IWMA
Estimated Contract Amount: \$ 50,000	

I. PROPOSAL OVERVIEW

For many years, rendering has served as an effective and dependable method for animal mortality disposal. For various reasons, rendering capacity in the State has significantly declined (some areas of the State have no rendering capacity). Last summer the lack of capacity resulted in such a backlog of dead animals that counties declared local emergencies to dispose of the animals and avert threats to public health, safety, and the environment. The status of the rendering industry remains so sensitive this summer that the industry is having difficulty processing even slight increases in normal mortalities.

The California Department of Food and Agriculture (CDFA) and the California Environmental Protection Agency (Cal/EPA) recognize the need to evaluate alternative disposal options. One of these options is composting. Currently, compost of mammalian tissue is prohibited by regulation because of concerns with the effectiveness of the composting process in reducing pathogens associated with mammalian tissue. Both CDFA and the California Integrated Waste Management Board (CIWMB) have taken steps within their authority to provide for the opportunity for pilot research projects to assess the safety of composting mammalian tissue. This contract would fund research to assess the efficacy of mammalian tissue composting, which is in line with Strategic Directive 8.4 "Conduct sufficient review and revision to ensure that the CIWMB's regulations are grounded in the best available science..." and Strategic Directive 9.1 "Develop a focused process to coordinate research activities that support the CIWMB's purpose and vision, utilizing basic research, applied research, and technology transfer."

This contract would fund bench-level and/or field-level research to assess the efficacy of composting mammalian tissue.

The contractor will prepare and submit a final report of the research findings, including results and conclusions.

CDFA is entering into a contract with the University of California, Davis, Western Institute for Food Safety and Security (UCD)/(WIFSS). Under this contract UCD/WIFSS proposes to:

- Review literature regarding composting techniques focused on pathogen reduction in animal carcasses
- Evaluate carcass composting parameters, including style, feedstocks, moisture content, compost pile temperature profiles and climate.
- Evaluate pathogen reduction capabilities of composting.

On June 27 and 28, 2007, the National Center for Foreign Animal and Zoonotic Disease Defense and the U.C. Davis Veterinary Medicine Extension sponsored a National Compost Meeting. The meeting brought national animal composting experts together with California regulators and the agricultural industry. The meeting participants raised many questions about the safety of composting animal carcasses. The UCD/WIFSS contract will provide information to help answer some of these questions, but funding for the UCD/WIFSS contract, and therefore the scope, is limited. For example, researchers will, as funding permits, include proxy organisms for agents of animal health or food safety concerns to assess the efficacy of a the selected composting project. The funding available for the UCD/WIFSS contract is not sufficient to research the full range of pathogens of concern. This contract would provide additional funding for research of a broader array of pathogens, thereby providing a more comprehensive assessment.

CIWMB staff will consider the project a success if the contractor's research protocols receive favorable comments during the required scientific peer review process.

If this project is not approved this FY, research will be delayed. Without adequate research, CDFA and CIWMB will not have the necessary information to determine if composting is an acceptable alternative disposal method for mammalian tissue. Without alternative disposal options the State will continue to rely on the rendering industry, which is currently operating at capacity.

II. PRIMARY TASKS, DELIVERABLES AND MILESTONES

Evaluate the pathogen reduction capability of composting

1. Following standard applied research principles, assess the efficacy of at least one cattle carcass composting technique using proxy organisms for agents of animal health /food safety concern accepted by CDFA and CIWMB.
2. Evaluate practical measures for critical control points (e.g., time-temperature curves, pile moisture content, micro-organism sampling techniques).

Data collection to occur over one full year to account for seasonal differences.

Contractor to submit a final report within 15 months of start of research project.

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CONTRACT ALLOCATION PROPOSAL

Project Title: Illegal Dumping Enforcement and Public Awareness Manual	
Program/Office: WCMP/CCFA	Concept No.: 2007-D-5
Requestor/Primary Contact: Bill Orr	Fund (IWMA, Oil, RMDZ, etc.): IWMA
Estimated Contract Amount: \$ 100,000	

I. PROPOSAL OVERVIEW

Illegal dumping poses an estimated \$200 million drain on state and local agency programs each year. The State/Local Illegal Dumping Enforcement Task Force (IDETF) found that illegal dumping enforcement and abatement programs and increased public awareness of illegal dumping play critical roles in controlling the illegal dumping problem. In addition, the IDETF found that there is not a one-size-fits-all illegal dumping abatement program as these county and city activities are assigned to a variety of agencies and staff members from jurisdiction to jurisdiction. The result is a mixture of illegal dumping program operational procedures and standards of enforcement and an absence of prevention awareness programs limiting the effectiveness of illegal dumping programs. The IDETF recommendations presented to the Board on March 13, 2007, call for the development of guidelines to help local government standardize operational procedures and standards and to establish a consistent state-level illegal dumping outreach program. This contract implements parts of Strategic Directives 8.6 and 8.9 by building on existing enforcement authority to “enhance local and regional capabilities to prevent and redress illegal dumping.”

This contract would be with a local government agency or association(s) to develop an Illegal Dumping Enforcement Manual that would provide guidelines for the standardization of operational procedures of illegal dumping enforcement programs and identified statewide enforcement standards. The Enforcement Manual would be best developed by one of several counties and cities with comprehensive illegal dumping programs partnering with an entity, such as the California Code Officers Enforcement Association, the California Conference of Directors of Environmental Health, the California District Attorney’s Association, Keep California Beautiful, and/or one or more consultants.

The Enforcement Manual will result in existing local programs providing more consistent and effective enforcement of illegal dumping codes and statutes. The manual will also provide counties and cities that either are developing or want to develop new illegal dumping programs, with the guidelines for program justification, and agencies with existing programs the justification for changes or additional authorities to increase program effectiveness. The Public Awareness portion of the contract will provide a consistent, statewide governmental voice to combat illegal dumping, while providing local jurisdictions with documents that can be easily adopted and utilized in their own programs.

Although enforcement policies and procedures exist in local illegal dumping enforcement and abatement agencies, the State has not developed a manual specifically addressing illegal dumping activities at the local or state level. The Manual does build on the work of the IDETF, other CIWMB enforcement and outreach programs, and progressive illegal dumping programs within California and from other states.

The effectiveness of this effort can be measured by the number of county and city jurisdictions developing programs modeled after the contents of the Manual, by modifications of existing programs based on the

Manual, and by local and state legislation utilizing the contents of the Manual. The bottom line is to reduce illegal dumping, the number of illegal dump sites and the associated annual abatement costs to cities, counties and the State.

If funding is not approved this fiscal year, the Illegal Dumping Enforcement and Public Awareness Manual will not be developed and no progress will have been made toward reducing the estimated \$200 million spent to abate illegal dumping each year. This will also result in a delay of the implementation of the Board's Strategic Directives 8.6 and 8.9.

II. PRIMARY TASKS, DELIVERABLES AND MILESTONES

The Enforcement Manual would describe the needed components and procedures for local (county or city) illegal dumping enforcement and abatement programs, and would be neutral towards the identification of appropriate departments and personnel series responsible for administering the program.

The Enforcement portion of the manual would include:

- Staff surveillance and investigation procedures, and the utilization of video and digital surveillance cameras;
- Procedures for identification of illegal dumping hot spots, data management standards, evidence collection, and protection;
- Actual enforcement procedures for field staff including the use of citations and vehicle impoundment;
- Case preparation and courts, administrative abatement procedures, ownership of evidence standards, and utilization of civilian complaints and witnesses; and
- An appendix of state statutes involving illegal dumping as well as examples of county and city codes addressing the various components of effective programs.

The Abatement portion of the manual would address both public and private property, including:

- The removal of illegal dumping from public property, utilization of evidence standards to assist in the abatement process, hot spot identification, route scheduling, and development of data on program time and cost;
- Abatement on private property could include utilization of clean and lien authority, right of entry, administrative abatement procedures, and disposal vouchers;
- Use of fencing and signage for both public and private property; and
- Decision tree graphics that delineate the logical progression of the process from complaint intake or observation, to field investigation, to legal actions, to administrative actions and finally to abatement.

The Public Awareness portion of the contract would require the development of a model public awareness campaign. Supplemental funding for the campaign will be sought from other public and private sources. These sources may include pursuing environmental crime settlement revenues. The awareness campaign portion would include:

- Review of existing state and local data on the demographic and ethnic considerations that need to be incorporated into effective illegal dumping prevention presentations;
- Development of illegal dumper profiles, message and campaign materials;

- Identification of the appropriate media for announcements, effective content, and adaptability of use by local governmental agencies or non-profit associations, cost estimates, and development steps.
- Consideration of existing outreach materials including PSAs in the used oil, waste tire and household hazardous waste programs that could be modified or used as a basis for illegal dumping prevention promotions; and
- Proposed content designs for a prevention awareness campaign.

The key milestones are as follows:

- Draft detailed workplan for the development of the Enforcement Manual (within 3 weeks of contract approval;
- Reconvene IDETF to review and comment on draft workplan, finalize workplan (within 6 weeks);
- Complete review of content considerations for a prevention awareness program (within 3 months);
- Draft enforcement and abatement portions of Manual (within 6 months)
- Draft model Public Awareness Campaign portion of Manual (within 6 months)
- CIWMB-IDETF workshop on draft Enforcement Manual (within 8 months)
- Board consideration of Illegal Dumping Enforcement Manual (within 10 months)

The primary deliverable is an Illegal Dumping Enforcement Manual for Local Communities comprised of three parts—enforcement, abatement, and public awareness.